## LIST OF CONTENTS

## Number 1

Articles

		71110100
L. K. Matthews, R. Sierra and N. Bergan (U.S.A.)	1	Measurement of temperatures in fibrous insulators subjected to concentrated solar radiation
T. B. Scheffler (South Africa)	9	Energy balance for variable volume storage
Dennis L. Larson (U.S.A.)	11	Operational evaluation of the grid-connected Coolidge solar thermal electric power plant
H. Salt and K. J. Mahoney (Australia)	25	An active charge, passive discharge floor space heating system
Richard Perez, Ken Webster, Robert Seals, Ronald Stewart and James Barron (U.S.A.)	33	Variations of the luminous efficacy of global and diffuse radiation and zenith luminance with weather conditions—description of a potential method to generate key daylight availability data from existing solar radiation data bases
J. I. Ajona and J. M. Gordon (Israel)	45	An analytic model for the long-term performance of solar air heating systems
Gladius Lewis (U.S.A.)	55	The applicability of diffuse solar radiation models to Huntsville, Alabama
S. M. Habali, M. A. S. Hamdan, B. A. Jubran and Adnan I. O. Zaid (Jordan)	59	Wind speed and wind energy potential of Jordan
		Number 2
M. A. Al-Abbasi, Ahlam J. Abdul-Ghani	71	Articles A liquid solar collector
and B. A. Ziada (Iraq)		
Adel M. A. Khalifa, M. M. A. Taha and M. Akyurt (Saudi Arabia)	79	Design, simulation, and testing of a new concentrating type solar cooker
A. Louche, M. Maurel, G. Simonnot, G. Peri and M. Iqbal ( <i>France</i> )	89	Determination of Ångström's turbidity coefficient from direct total solar irradiance measurements
S. Jeevananda Reddy (Mozambique)	97	The estimation of global solar radiation and evaporation through precipitation—a note

## List of Contents

R. S. Soin, S. Raghuraman and V. Murali (India)	105	Two-phase water heater: model and long term per- formance
Jong Ho Lee, Mo Chung and Won-Hoon Park (Korea)	113	An experimental and theoretical study on the cor- rugated water-trickle collector
X. A. Wang, Y. F. Xu and X. Y. Meng (China)	125	A filter method for transient testing of collector performance
J. Srinivasan and Abhijit Guha (India)	135	Concentration profile in the gradient zone of small solar ponds
John Littler	137	Book Reviews The Complete Solar Home Book by Brad Schapp
S. V. Szokolay	137	First EC Conference on Solar Heating, edited by C. Den Ouden
A. R. Despic	138	Hydrogen as an Energy Carrier, edited by G. Imarisio and A. S. Strub
T. W. Greeves	138	Energy and Structural Change in the Asia Pacific Region, published by the Philippine Institute for Development Studies
A. Dewint	139	Renewable Energy in Cities by the Center for Renewable Resources
A. Harriman	139	Photoelectrochemistry, Photocatalysis and Photo- reactors, Fundamentals and Developments, edited by M. Schiavello
		Number 3
		Articles
S. S. Prakash, J. Clair Batty and J. Paul Riley (U.S.A.)	141	An investigation of a surface drift current return pipe system for application on salt gradient solar ponds
<ul><li>K. Prajuntaboribal and</li><li>N. Chaikum (<i>Thailand</i>)</li></ul>	149	Photogalvanic effect in the riboflavin-diethanolamine system
JL. Scartezzini (Switzerland)	155	Performances of a water hybrid collector powered by a solar pump
D. A. Anati (Israel)	159	Salinity profiles in steady-state solar ponds
David Govaer (U.S.A.)	165	Apparent thermal conductivity of a local adobe building material
G. Y. Saunier, T. A. Reddy and S. Kumar ( <i>Thailand</i> )	169	A monthly probability distribution function of daily global irradiation values appropriate for both tropical and temperate locations

S. Chakraverty, N. K. Bansal 179 Transient analysis of a CPC collector with time deand H. P. Garg (India) pendent input function M. A. Sattler, S. Sharples 187 The geometry of the shading of buildings by various and J. K. Page (England) tree shapes D. A Kouremenos. 203 Direct and diffuse solar radiation correlations for K. A. Antonopoulos and tilted surfaces in Athens, Greece S. Doulgerakis (Greece) Number 4 Articles Thomas L. Webster, 219 Experimental evaluation of solar thermosyphons J. Pascal Coutier. with heat exchangers J. Wayne Place and Mehdi Tavana (U.S.A.) K. G. T. Hollands and 233 An improved model for diffuse radiation: correction S. J. Crha (Canada) for atmospheric back-scattering K. G. T. Hollands and 237 A probability density function for the diffuse frac-S. J. Crha (Canada) tion, with applications 247 V. Bădescu (Romania) Can the model proposed by Barbaro et al. be used to compute global solar radiation on the Romanian territory? D. L. Pulfrey, P. R. B. Ward 255 A photovoltaic-powered system for medium-head and W. G. Dunford (Canada) pumping Manuel Castañs. 267 Theoretical maximal efficiency of diffuse radiation Alfonso Soler and Felix Soriano (Spain) Arvid Skartveit and 271 A model for the diffuse fraction of hourly global Jan Asle Olseth (Norway) radiation B. Herrmann, H. Karl, E. Kopf 275 Realistic indoor testing of photovoltaic water and G. Lehner (F.R.G.) pumping systems L. Adell, R. Zubiaur, F. Martín, 281 Development of a methodology for the estimation F. Ferrando, P. Moreno, of wind energy resources in relatively large areas: L. Varona and A. Pantoja application to the eastern and central parts of Spain (Spain) G. L. Harding and S. Craig 297 Thermosiphon heat extraction and automatic (Australia) freeze protection in a hot water system incorpo-

rating evacuated solar collectors

## Number 5

		Articles
A. H. Fanney and S. A. Klein (U.S.A.)	303	Comparison of experimental and calculated per- formance of integral collector-storage solar water heaters
JP. Fohr and A. R. Figueiredo (France)	311	Agricultural solar air collectors: design and performances
Yair Zarmi (U.S.A.)	323	Fluctuations in long-term performance of solar devices: the single-pass, open-loop hot water system example
D. Faiman, A. Zemel and A. Zangvil (Israel)	327	A method for monitoring insolation in remote regions
Brian E. Lee (Hong Kong)	335	Wind flow over roof-mounted flat plate collectors
P. P. Groumpos and G. Papageorgiou (U.S.A.)	341	An optimal sizing method for stand-alone photo-voltaic power systems
Stephen M. Turton (Australia)	353	The relationship between total irradiation and sunshine duration in the humid tropics
JL. Scartezzini, A. Faist and J. B. Gay (Switzerland)	355	Experimental comparison of a sunspace and a water hybrid solar device using the LESO test facility
Christian Gueymard (Canada)	367	An anisotropic solar irradiance model for tilted surfaces and its comparison with selected engineering algorithms
		Number 6
		In Memoriam
Peter E. Glaser (U.S.A.)	387	Dr. John Yellott (1908–1986)
		Articles
J. F. Atkinson and D. R. F. Harleman (U.S.A.)	389	Wind-mixing experiments for solar ponds
Ralph W. Matthews (Australia)	405	Solar-electric water purification using photocatalytic oxidation with TiO <sub>2</sub> as a stationary phase
M. Castro, J. Peire and P. Martinez (Spain)	415	Five-year CESA-I simulation program review
Tadj Oreszczyn and Barrie W. Jones ( <i>U.K.</i> )	425	A transient test method applied to air heating collectors
Miguel G. Neumann and leda A. Pastre (Brazil)	431	Energy transfer between basic dyes

Bai M. Mahajan (U.S.A.)

437 Measurement of interzonal heat and mass transfer by natural convection

Martin D. España and Luis Rodriguez V. (Mexico)

447 Approximate steady-state modeling of solar trough collectors

G. F. Jones (U.S.A.)

455 Consideration of the heat-removal factor for liquid-cooled flat-plate solar collectors

I Volume 38 list of contents and author index